non-medullated fibres. The ganglion cells not only assist in the conversion of a single nerve fibre into a group of fibres, but at the same time are centres for the members of the group, in so far as they possess a nutritive power over them ; they are not, however, centres in the sense of being capable of reflexly setting these fibres into activity. M. A. STARR.

PATHOLOGY OF NERVOUS SYSTEM.

Le Rhumatisme Cérébral, la Folie Rhumatismale, et la Goutte Cérébrale. LEGRAND DU SAULLE, *Gazette des hôpitaux*, pp. 57, 58, 59, etc.

In a series of lectures Legrand du Saulle calls attention to the various disorders of the intellect found in rheumatic and gouty patients. After first speaking against the prevailing tendency of considering insanity as a morbid entity, he says that more attention should be paid to the connection between mental affections and the various diatheses and dyscrasias. So he now wishes to call attention to the influence of rheumatism and gout in the production of these disorders. The attacks of cerebral rheumatism (rheumatic insanity) may be either overacute, acute, subacute, or chronic. The meninges in this affection comport themselves in the same manner as serous membranes in other parts of the body, those of the joints, for instance, and may be attacked in the same manner. The lesion and process are the same in both. The same as that joint which is the weakest is the one generally attacked in rheumatic patients, so the meninges are generally affected in those whose nervous system is weakened through whatever cause. Therefore heredity is an important etiological factor. Hysterical and epileptic patients seem to form an exception. Those addicted to alcohol, on the contrary, are frequently affected. The better class of patients are the ones most frequently affected for the reason that their brain is more used and that they suffer more from cerebral fatigue. Therefore intellectual pursuits and severe mental efforts act as exciting causes. The overacute and acute forms are preceded by certain prodromal symptoms. They rarely occur before the fifth day of a rheumatic attack ; generally between the fifth and twentieth. Exceptionally high temperature and intensity of cardiac manifestations are significant, but restlessness of the patient, moral anxiety, preoccupation for the future, transitory delirium, and persistent insomnia, are to be looked upon with the greatest apprehension. The overacute form is sometimes preceded by one or another of these symptoms, but generally it attacks the patient with intense suddenness. This is the rarest of all the forms, having occurred only five times in sixty-nine cases of cerebral rheumatism. The acute form occurred fifty-two times in the sixty-nine. It is preceded by the various symptoms : the temperature rises, the pulse increases, muscular twitchings occur, and the delirium appears. The delirium is generally of a low-

muttering type, which is exceptionally followed by convulsions. either eclamptic or choreic. Soon somnolence and coma set in, Death may occur in from twelve to twenty-four hours, or may not occur for five or six days. The subacute form is the one generally known as rheumatic insanity, or rheumatic mania. It is exceedingly rare, according to Simon, occurring once among four hundred insane, and once among one hundred rheumatic, but Bull considers even these figures too high. This form generally occurs when the rheumatic fever is on the decline. Sometimes, however, it sets in during the rheumatic attack itself. The first symptoms occasionally consist in a violent delirium, somewhat similar to the delirium of the acute form of cerebral rheumatism, but more frequently the cerebral affection takes on a melancholic or depressive character. The author cites various cases of this form. The most prominent symptoms are: (1) A depressive, melancholic delirium; (2) hallucinations, particularly of sight, but also of hearing, taste, smell, and touch; (3) a weakening of the intellectual faculties, always well marked and sometimes permanent; (4) choreiform movements; (5) a profound cachexia. Generally this form terminates in recovery. When death does occur it is due to the progressive cachexia. The author then enters into the question whether rheumatic insanity is really a special form of insanity, or a simple melancholia, attacking persons so predisposed. This is decided in favor of its being a special form. "Rheumatic insanity is a reality." GEO. W. JACOBY.

Alcoholic Paralysis. J. DRESCHFELD. *Brain*, xxxii., p. 432.

The observations of Dreschfeld on alcoholic paralysis, published in 1884, have excited general interest, and elicited a number of able articles with numerous reports of cases, both in Europe and America, to which reference is made in this (his second) paper on the subject. He now divides alcoholic paralysis into two groups, according to the more prominent symptoms present: the alcoholic ataxia, and the alcoholic paralysis. In the ataxic form it is necessary to distinguish between cases where there is marked incoördination without much paralysis, and those where the gait resembles the ataxic gait but is in some measure due to the paralysis of the legs. In both, severe lancinating pains in the legs, and occasionally in the arms; spots of anæsthesia and of retarded sensibility; tenderness in the muscles of the calf, and absence of tendon reflexes are present. Argyll-Robertson pupil is not found, and there are no ophthalmoscopic changes. In the latter cases a moderate atrophy of the muscles is present and reaction of degeneration is to be elicited. In the paralytic form there is marked progressive paralysis with atrophy and reaction of degeneration in various groups of muscles of the legs, so that the patients are unable to walk at all. There is loss of tendon reflexes. Cutaneous anæsthesia and muscular hyperæsthesia are well marked. An occasional sudden "giving way" of the legs, and consequent falling, is observed in some cases.

In both forms of alcoholic paralysis the mental condition is markedly changed. The patients may answer questions without hesitation or incoherence. But they are subject to peculiar delusions ; fancy themselves in places far from their actual home, and give long and detailed accounts of things that they have seen, walks, and even journeys, that they have taken, or visits that they have made, when in fact they have not been out of bed. One patient said that he got up every day, went into the next ward, and conversed with other patients, though he had never left the bed at all. When further pressed he gave a description of the ward, and details of his conversation with other patients, with a minuteness and readiness which was astonishing. (The recorder can confirm this by an observation recently made upon a lady, who gave, with many particulars, a long story of having made a call upon a certain physician on the morning of the day on which she was seen, of having to wait in his office, of her conversation with the waitress, of the sudden departure of the physician without seeing her, and of a message she left for him. She had not been out of her room at all on that day.) Dreschfeld considers this mental state as characteristic of alcoholic conditions.

H. Hun, in a very complete review of this subject (*Amer. Jour. of the Med. Sci.*, 1885, April), considers mental delusions, delirium, and loss of memory constant symptoms. The delirium is never as active, however, as in an acute attack of delirium tremens.

All authorities agree that the lesion in alcoholic paralysis is a multiple peripheral neuritis. The prognosis is good when the general strength of the patient is fair. The chief danger is heart failure or some intercurrent disease. The treatment consists chiefly in cutting off the supply of alcohol, either suddenly or gradually. Warm baths, milk diet, tonic treatment, and strychnine are the remedies usually found of service.

Loss of Pupil Reflex to Light. *Neurol. Centralbl.*, 1886, No. 1.

Uhthoff has investigated a very large number of individuals, both healthy and diseased, with the view of determining the conditions under which the pupil fails to respond to light. In no healthy individual was this condition found, though several hundreds were tested. It was lost in 136 cases out of 550 nervous cases and 12,000 cases of eye-disease. Of these cases 92 were suffering from locomotor ataxia (64 % of the cases of this disease examined presenting this symptom) ; 12 were suffering from dementia paralytica ; 8 had a gross cerebral lesion ; 11 had cerebral syphilis ; 2 had a congenital defect of the iris ; 2 had multiple sclerosis ; 2 were suffering from railway spinal shock, and in one case of retinitis pigment., of head injury, of aneurism of the aorta, of abuse of tobacco, and of hystero-epilepsy, it was present. The symptom is, therefore, confined to a very few classes of disease, and is, therefore, of important diagnostic value.

A New Method of Testing Tactile Sensibility in Unilateral Brain Lesion. H. OPPENHEIM. *Neurol. Centralbl.*, 1885, No. 23.

In unilateral brain lesion a partial hemianæsthesia is often present, which may be overlooked. If the slightly anæsthetic side is touched, the patient says he feels the touch, and is sometimes unable or unwilling to admit a difference in the sensation between this and the unaffected side. Oppenheim finds that in these cases, if the patient's eyes are covered, and the symmetrical spots on the body or limbs are touched at once on both sides, he will perceive the touch on both sides if no anæsthesia is present; but on the unaffected side only, if the other is slightly anæsthetic. The recorder can confirm this statement as tested on two cases.

M. A. STARR.

On Two Cases of Tabes Dorsalis with Presence of Knee-Jerks. BY Prof. C. WESTPHAL. (Discussed at meeting of March 8, 1886, of the Berlin Society of Psychiatry and Nervous Diseases, and reported in the *Neurol. Centralblatt*, March 15, 1886.)

The first case is that of a man fifty years of age, whose disease began in summer of 1882, and who was received into the Charité in July, 1883. At that time there was distinct ataxia, a peculiar rigidity following upon abduction of the thigh, and upon rapid flexion of the knee, diminution of power in the lower extremities, marked disturbances of sensibility, incontinence of urine, etc. Knee-jerks, at first easily elicited; they were diminished in September, and were totally abolished in October, 1883. The autopsy made at the beginning of 1884 revealed an affection of the external portion of the posterior columns which extended up to the margin of what W. terms the root-zone of the posterior columns, which zone is adjacent to the region of the substantia gelatinosa Rolandi. There was also disease of the columns of Clarke (involving both the nerve fibres and the nerve cells), and of portions of the lateral columns.

The second case was very similar. Beginning of disease in 1882, with ataxia, motor paresis, etc. Knee-jerks normal until Nov. 24, 1884; Jan. 17, 1885, they were very weak; Jan 23d they had disappeared altogether; Jan. 24th, death. A complicated affection involving the lateral columns and the columns of Clarke; the gray degeneration of the postero-external columns extended outward as far as the "root-zone."

Westphal thinks it a mere coincidence that various portions of the cord were found diseased. He opposes the views of Déjerine and others that the affection of the lateral columns in such cases as these is due to meningitic processes; in these cases there was no thickening of the pia over the lateral columns. In the cases just quoted Westphal attributes the motor paresis and the rigidity to the affection of the lateral columns. [The reader is also referred to a case reported by Westphal in which there was

presence of knee-jerks in spite of affection of the posterior columns, which (case) was reviewed in the preceding number of this JOURNAL.] B. S.

Sclerose primitive des cordons latéraux de la moelle, ou tabes spasmodique. Dr. E. BOMPARD. *Gazette des hôpitaux*, p. 35, 1886.

Case of a man aged thirty-three years. Entered the hospital Oct. 23, 1885; has always been well. Family history unimportant. In October, 1881, he was exposed during an entire night to a severe rain-storm. Two weeks later, severe shooting pains in the lumbar region. These pains lasted for several months. He then noticed a weakness of the genital functions, and a lassitude of the inferior extremities. In April, 1882, he observed that he dragged his feet somewhat, and that he *wore out his shoes at the toes*. Pains had disappeared. Difficulty of walking increased. In January, 1883, he was obliged to use a cane. In April his feet dragged along the ground while walking, and he could hardly lift them a centimetre from the ground. The legs now commenced to become stiff. When seated, a severe tremor would occur in the legs. In November he could only walk by aiding himself with his arms, dragging himself along by holding on to objects in the room. At this time a weakness and stiffness of the upper extremities became apparent. January, 1884, complete impotence of both inferior and superior extremities. The condition at time of writing was as follows: No affection of speech, no anæsthesia, no hyperæsthesia. Electric contractility of muscles preserved. Increased reflexes. Severe ankle clonus. Legs stiff and can only be slightly flexed by the patient. Arms contractured and in proximity with the body. The forearm flexed upon the arm at right angles, and the fingers flexed upon the palm. The patient is unable to execute any movement with the fingers. The contracture can be forcibly overcome and the arm extended, but it returns again to the acquired position. Patient was treated in the hospital, but left in December, not wishing to remain any longer; for this reason no autopsy was obtained. Owing to the rarity of these cases the author publishes this one, incomplete as it is.

Paramyoclonus Multiplex. P. MARIE. *Progrès médical*, p. 152, 1886.

The case described by Marie is the third of the kind, the first having been observed by Friederich and the second by Löwenfeld. Marie's case is as follows: Patient—male, age fifty-two years. Family history unimportant. Had a chancre at the age of twenty. No secondary symptoms, no specific treatment. Married at age of thirty-four. One child after twelve years, which has always been healthy. At age of twenty-seven patient had dull, not lancinating, pains in the legs. At this time he also had dull pains in the arms and shoulders, also pains between the shoulder blades.

In the morning upon awakening his arms were heavy and cold, so that he could hardly lift them. His legs were weak, and he grew fatigued easily. Early in August he had an attack of vertigo, which was followed by loss of consciousness, lasting for about twenty minutes. Subsequently delirium. Since about three years he has had shocks, agitative movements (sécousses) in the lower extremities. When the patient first came under observation it was noticed that from time to time a peculiar movement took place at the knee joint, which could not be clearly described either as flexion or extension. In standing these movements only occurred at more or less long intervals, but when the patient was made to lie down they increased very much in frequency and intensity. These shocks occur sometimes at intervals of several minutes, and sometimes at intervals of as many seconds; they are sometimes isolated and sometimes extend over several muscles. Their general seat is over the muscles of the thigh, producing either a slight movement of the thigh itself or a slight jumping movement, a kind of sudden extension of both legs, with almost immediate genuflexion. These shocks are also observed in the muscles of the trunk and shoulders. Voluntary movements were not impeded. Certain excitations seemed to increase the phenomenon, as, for instance, percussion over the patellar tendon. The idio muscular contractility is very much exaggerated. Percussion over the muscles themselves also produces the peculiar agitation. It seems to Marie as if the irritation of the skin itself bears a great part in its production. Tickling the soles of the feet produces these shocks with more certainty and intensity than any other means. Tickling of other parts of the body gives no result, but pricking with a pin does. A prolonged pressure exercised upon the external vastus of the left side produces distinct contraction of the right triceps, about forty-four per minute, while the compressed side contracts only infrequently. Position of the limbs also seems to influence the contractions. During sleep the contractions cease entirely. Various myographic tracings were taken, for which and for more detailed description of the symptoms we must refer to the original. Electrical examination showed no modification, either quantitatively or qualitatively, but the examination itself, and particularly electrical irritation of the skin, produced intense contractions in the various muscles.

GEO. W. JACOBY.

Case of Brachial Monoplegia Due to Lesion of the Internal Capsule. By A. H. BENNETT. *Brain*, xxix., p. 78.

An old gentleman had a stroke of apoplexy attended by paresis of the face, and tongue on the left side, and followed the next day by total paralysis of the left arm, difficulty of deglutition and of speech, and involuntary evacuation. In the course of a month all the symptoms except the paralysis of the left arm had passed off; the paralysis remained until his death two months af-

ter his first attack. The autopsy showed a small ($\frac{5}{8}$ x $\frac{3}{8}$ x $\frac{1}{8}$ inch) area of softening at the junction of the internal capsule and centrum semiovale, involving the upper margin of the lenticular nucleus at a point just beneath the middle of the posterior central convolution. It had divided a few of the strands of fibres of the motor tract as they entered the internal capsule. The fact that such a lesion should cause permanent paralysis of the left arm, only leaving the left face and leg unimpaired, shows that the fibres connecting motor impulses from the cerebral cortex run in separate ribbon-shaped bundles through the internal capsule. The motor centres for face, arm, leg, and trunk lie above one another, beginning from below on the cortex. The four bundles of conducting fibres descending from those centres in a downward and obliquely inward course may be compared when viewed from in front to four rays of a half-opened fan. These converging in this attitude toward the upper part of the internal capsule enter its knee, and as they do so change their direction. Preserving their relative stations they become twisted from their former oblique position to one completely antero-posterior; so that what was external and in front becomes anterior, what was internal and behind becomes posterior. The half-opened fan is now shut, and its rays which before were seen obliquely in front are now seen from the side. In the last position all the series of fibres pass through the internal capsule in well-defined ribbon-shaped bundles, those for the face being the most anterior, behind which in successive order we find those for the arm, leg, and trunk. In the case reported the second ray of the fan was injured. The situation of this band in a horizontal section of the capsule is a little behind the knee, and opposite the apex of the lenticular nucleus.

The case confirms the statements made by Flechsig in 1881, regarding the course of the motor tract and the situation of its respective bundles. M. A. STARR.

A Case in which an Old Amputation of the Left Upper Arm was Associated with an Atrophied Right-Ascending Parietal Convolution. By JOSEPH WIGLESWORTH, M.D. *Journal of Mental Sciences*, vol. xxxii., p. 50.

This is the case of a female epileptic who died at the age of fifty-six, and who in the fourth year of her age met with an accident which necessitated amputation of the left upper extremity. "For a period, therefore, of fifty-two years this patient was deficient in the movements and impressions connected with the left arm and hand, and it was consequently to be expected that the cerebral centre in correspondence with this region would exhibit some amount of defective development." The post-mortem examination showed that the *right* ascending parietal convolution in its lower three-fourths was half the size of the corresponding convolution on the opposite side. The atrophied region would correspond to Ferrier's centre for movements of hand and wrist.

[According to the more prevalent view the chief atrophy should in this case have been in the ascending *frontal* convolution, in the "arm centre," but the plate published with the article exhibits a much larger ascending frontal convolution on the right than on the left side. The type of convolutions (in this case) is very irregular, and we should be very careful not to use this single case as proof of the existence of an "arm centre" or of a "hand and wrist centre" within the former.]

Cases of Cerebellar Disease. By GEORGE WILKINS, M.D., Professor of Med. Jurisprudence, etc., McGill University. *Canada Medical and Surgical Journal*, vol. xiv., p. 513, 1886.

Prof. Wilkins reports three cases of cerebellar disease. In two of these cases, the diagnosis was supported by the post-mortem examination; in the third no post-mortem was allowed, but from the history of the case we believe the author justified in making a diagnosis of cerebellar apoplexy. In all three cases extreme suddenness of death, due to effusion of blood or pus into fourth ventricle, was a marked symptom. The salient points of the two cases with autopsy are as follows:

CASE 1. A young lady of nineteen complained of intense headache and had a sudden fainting fit in the early morning; from this she did not recover, and before the physician arrived she died. The autopsy, made a fortnight after interment, showed that the under and lateral surfaces of the right temporal lobe were covered with an extensive but thin clot; so also were pons and medulla. Right lobe of cerebellum appeared considerably larger than left. On cutting into it a large clot, the size of a plum, was discovered close to the central lobe. On examining more closely a pinhole aperture was seen on the superior surface of this lobe of the cerebellum, and was here continuous with the clot covering the temporal lobe. A blood-vessel had burst in this lobe of the cerebellum, the blood escaping into the subarachnoid space covering it, and along this space forward on to the cerebrum and downward into the fourth ventricle.

CASE 2 ("3"). A boy aged seventeen fell from a cart, striking his shoulders and then his head; from that time onward headache, pains all over body, dizziness and vomiting which persisted; endeavored to walk, but was unsteady and weak. On the fifteenth day after fall became suddenly cyanotic and almost asphyxiated. Pulse 120, regular; pupils contracted; unable to open mouth; artificial respiration was kept up for a while. Patient died within two or three minutes after its cessation. Post-mortem:—membranes of brain were found normal, except a small portion overlying the cerebellum between the flocculus and medulla oblongata. On carefully removing the membranes and raising the medulla several drops of thick, creamy pus were observed between the cerebellum and the floor of fourth ventricle. An abscess cavity of the size of a large filbert, filled with pus, was

found in the right lobe of cerebellum ; in this case the pus had found its way into the fourth ventricle. These cases are interesting, but call for no further comment. B. S.

MENTAL PATHOLOGY.

Schools in Hospitals for the Insane. Dr. J. B. ANDREWS (Buffalo, New York, Insane Hospital, 1884, Report) says concerning the school recently established in his hospital :

"The school is held in one of the dining-rooms during the morning hours. The teacher is an attendant upon the ward who has had experience in one of the schools of Buffalo. The order and good conduct observed are the same as exist in outside schools." We do not speak of this effort as any thing new or to compare it to what is being done in some other institutions, but simply to note it as among the means of occupation found useful in certain cases. It assimilates the life of these younger people to that of others of the same age or to their former life outside the asylum, and they certainly derive benefit from this mental effort. This was recognized by Dr. Brigham, who states (Utica Asylum Annual Report, 1844) : "The school is beneficial especially to the convalescent, those that are melancholy, and those who appear to be losing their mental powers and sinking into a demented condition. Those who have recovered but continue with us for fear of a relapse, and to test the permanency of their recovery, derive both pleasure and profit from attending. Those that are melancholy and depressed are beguiled from their sorrows, and for a while made to forget them, and thus the way is often prepared for their restoration. Those who appear to be losing in mental power are much benefited by the daily and regular exercise of their minds ; their memories improve, and they become more active and cheerful. The want of proper mental occupation according to our observation is one of the most pressing wants of lunatic asylums." Since this was written schools have been included among the means of moral treatment in several asylums, but it remained for Dr. Lalor, to elevate it to such prominence that the Richmond District Lunatic Asylum in Dublin, Ireland, is noted for its regular systematic instruction given to a large number of patients. In his hands it has proved an invaluable agent of treatment. Dr. Dwyer, of the Mullingar District Asylum, Ireland, has met with such success that he writes : "While I am on the subject of schools I cannot refrain from expressing my astonishment that every well-organized asylum has not its school. I have seen wonderful results from schools." Pinel says : "Thirty years' experience has taught me that a striking analogy subsists between the act of educating and teaching the young and that of managing the insane, as the same principles are applicable to both." This analogy is constantly noted by those who have charge of the insane, but all do not recognize it as so far-reaching as to warrant the effort to teach all of the insane. The different